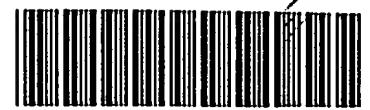


RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 09/490,064
Source: 1600
Date Processed by STIC: 03-17-2005

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1600

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/490,064

DATE: 03/17/2005

TIME: 12:08:53

Input Set : N:\Crf3\RULE60\09490064.raw.txt

Output Set: N:\CRF4\03172005\I490064.raw

SEQUENCE LISTING

3 (1) GENERAL INFORMATION:

5 (i) APPLICANT: Knappik, Achim
 6 Pack, Peter
 7 Ilag, Vic
 8 Ge, Liming
 9 Moroney, Simon
 10 Plueckthun, Andreas

13 (ii) TITLE OF INVENTION: Protein/(Poly)peptide libraries

15 (iii) NUMBER OF SEQUENCES: 373

17 (iv) CORRESPONDENCE ADDRESS:

18 (A) ADDRESSEE: James F. Haley, Jr., Esq. c/o Fish & Neave
 19 (B) STREET: 1251 Avenue of the Americas
 20 (C) CITY: New York
 21 (D) STATE: New York
 22 (E) COUNTRY: USA
 23 (F) ZIP: 10021

25 (v) COMPUTER READABLE FORM:

26 (A) MEDIUM TYPE: Floppy disk
 27 (B) COMPUTER: IBM PC compatible
 28 (C) OPERATING SYSTEM: PC-DOS/MS-DOS
 29 (D) SOFTWARE: PatentIn Release #1.0, Version #1.30 (EPO)

31 (vi) CURRENT APPLICATION DATA:

C--> 32 (A) APPLICATION NUMBER: US/09/490,064
 C--> 33 (B) FILING DATE: 24-Jan-2000

35 (vii) PRIOR APPLICATION DATA:

W--> 36 (A) APPLICATION NUMBER: US/09/025,769
 37 (B) FILING DATE: 18-FEB-1998
 W--> 38 (A) APPLICATION NUMBER: EP 95 11 3021.0
 39 (B) FILING DATE: 18-AUG-1995

41 (viii) ATTORNEY/AGENT INFORMATION:

42 (A) NAME: James F. Haley, Jr., Esq.
 43 (B) REGISTRATION NUMBER: 27,794
 44 (C) REFERENCE/DOCKET NUMBER: MORPHO/5

46 (ix) TELECOMMUNICATION INFORMATION:

47 (A) TELEPHONE: (212)596-9000
 48 (B) TELEFAX: (212)596-9090

50 (2) INFORMATION FOR SEQ ID NO: 1:

52 (i) SEQUENCE CHARACTERISTICS:

53 (A) LENGTH: 20 amino acids
 54 (B) TYPE: amino acid
 55 (C) STRANDEDNESS:
 56 (D) TOPOLOGY: linear

RAW SEQUENCE LISTING
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Input Set : N:\CrF3\RULE60\09490064.raw.txt
Output Set: N:\CRF4\03172005\I490064.raw

58 (ii) MOLECULE TYPE: protein
 63 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:
 65 Ala Gly Gly Gly Ser Gly Gly Gly Ser Gly Gly Gly Ser Gly
 66 1 5 10 15
 68 Gly Gly Gly Ser
 69 20
 71 (2) INFORMATION FOR SEQ ID NO: 2:
 73 (i) SEQUENCE CHARACTERISTICS:
 74 (A) LENGTH: 82 base pairs
 75 (B) TYPE: nucleic acid
 76 (C) STRANDEDNESS: single
 77 (D) TOPOLOGY: linear
 79 (ii) MOLECULE TYPE: other nucleic acid
 80 (A) DESCRIPTION: /desc = "synthetic oligonucleotide"
 85 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:
 87 TCAGCGGGTG GCGGTTCTGG CGGCAGGTGGG AGCGGTGGCG GTGGTTCTGG CGGTGGTGGT 60
 89 TCCGATATCG GTCCACGTAC GG 82
 91 (2) INFORMATION FOR SEQ ID NO: 3:
 93 (i) SEQUENCE CHARACTERISTICS:
 94 (A) LENGTH: 83 base pairs
 95 (B) TYPE: nucleic acid
 96 (C) STRANDEDNESS: single
 97 (D) TOPOLOGY: linear
 99 (ii) MOLECULE TYPE: other nucleic acid
 100 (A) DESCRIPTION: /desc = "synthetic oligonucleotide"
 105 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
 107 AATTCCGTAC GTGGACCGAT ATCGGAACCA CCACCGCCAG AACCAACGCC ACCGCTCCCCA 60
 109 CCGCCGCCAG AACCGCCACC CGC 83
 111 (2) INFORMATION FOR SEQ ID NO: 4:
 113 (i) SEQUENCE CHARACTERISTICS:
 114 (A) LENGTH: 69 base pairs
 115 (B) TYPE: nucleic acid
 116 (C) STRANDEDNESS: single
 117 (D) TOPOLOGY: linear
 119 (ii) MOLECULE TYPE: other nucleic acid
 120 (A) DESCRIPTION: /desc = "synthetic oligonucleotide
 library"
 W--> 121 (ix) FEATURE:
 124 (A) NAME/KEY: misc_feature
 125 (B) LOCATION: 28..45
 127 (D) OTHER INFORMATION:/product= "6 random codons by
 128 trinucleotide mutagenesis (19aa, no Cys)"
 131 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
 133 GATACGGCCG TGTATTATTG CGCGCGTNNK NNKNNKNNKN NKNNKGATTA TTGGGGCCAA 60
 135 GGCACCCCTG 69
 137 (2) INFORMATION FOR SEQ ID NO: 5:
 139 (i) SEQUENCE CHARACTERISTICS:
 140 (A) LENGTH: 84 base pairs
 141 (B) TYPE: nucleic acid

RAW SEQUENCE LISTING

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Input Set : N:\Crf3\RULE60\09490064.raw.txt

Output Set: N:\CRF4\03172005\I490064.raw

W--> 142 (C) STRANDEDNESS: single
143 (D) TOPOLOGY: linear
145 (ii) MOLECULE TYPE: other nucleic acid
146 (A) DESCRIPTION: /desc = "synthetic oligonucleotide
147 library"
150 (ix) FEATURE:
151 (A) NAME/KEY: misc_feature
152 (B) LOCATION:28..57
153 (D) OTHER INFORMATION:/product= "10 random codons by
154 trinucleotide mutagenesis (19aa, no Cys)"
156 (ix) FEATURE:
157 (A) NAME/KEY: misc_feature
158 (B) LOCATION:58..60
159 (D) OTHER INFORMATION:/product= "random codon by
160 trinucleotide mutagenesis (TTT/ATG)"
162 (ix) FEATURE:
163 (A) NAME/KEY: misc_feature
164 (B) LOCATION:64..66
165 (D) OTHER INFORMATION:/product= "random codon by
166 trinucleotide mutagenesis (GTT/TAT)"
169 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
171 GATACGGCCG TGTATTATTG CGCGCGTNNK NNKNNKNNKN NKKNNKNNN KNNKNNK
173 GATKWTTGGG GCCAAGGCAC CCTG
175 (2) INFORMATION FOR SEQ ID NO: 6:
177 (i) SEQUENCE CHARACTERISTICS:
178 (A) LENGTH: 21 base pairs
179 (B) TYPE: nucleic acid
180 (C) STRANDEDNESS: single
181 (D) TOPOLOGY: linear
183 (ii) MOLECULE TYPE: other nucleic acid
184 (A) DESCRIPTION: /desc = "synthetic oligonucleotide"
189 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
191 GATACGGCCG TGTATTATTG C
193 (2) INFORMATION FOR SEQ ID NO: 7:
195 (i) SEQUENCE CHARACTERISTICS:
196 (A) LENGTH: 17 base pairs
197 (B) TYPE: nucleic acid
198 (C) STRANDEDNESS: single
199 (D) TOPOLOGY: linear
201 (ii) MOLECULE TYPE: other nucleic acid
202 (A) DESCRIPTION: /desc = "synthetic oligonucleotide"
207 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:
209 CAGGGTGCGCT TGGCCCC
211 (2) INFORMATION FOR SEQ ID NO: 8:
213 (i) SEQUENCE CHARACTERISTICS:
214 (A) LENGTH: 17 base pairs
215 (B) TYPE: nucleic acid
216 (C) STRANDEDNESS: single
217 (D) TOPOLOGY: linear

RAW SEQUENCE LISTING DATE: 03/17/2005
PATENT APPLICATION: US/09/490,064 **TIME:** 12:08:53

Input Set : N:\Crf3\RULE60\09490064.raw.txt
Output Set: N:\CRF4\03172005\I490064.raw

219 (ii) MOLECULE TYPE: other nucleic acid
220 (A) DESCRIPTION: /desc = "synthetic oligonucleotide"
225 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:
227 GCAGAAGGCG AACGTCC
229 (2) INFORMATION FOR SEQ ID NO: 9:
231 (i) SEQUENCE CHARACTERISTICS:
232 (A) LENGTH: 80 base pairs
233 (B) TYPE: nucleic acid
234 (C) STRANDEDNESS: single
235 (D) TOPOLOGY: linear
237 (ii) MOLECULE TYPE: other nucleic acid
238 (A) DESCRIPTION: /desc = "synthetic oligonucleotide
W--> 239 library"
242 (ix) FEATURE:
243 (A) NAME/KEY: misc_feature
244 (B) LOCATION:39..41
245 (D) OTHER INFORMATION:/product= "random codon (mixture of
246 GCT, CGT, CAT, TCT, TAT)"
248 (ix) FEATURE:
249 (A) NAME/KEY: misc_feature
250 (B) LOCATION:42..53
251 (D) OTHER INFORMATION:/product= "random codons by
252 trinucleotide mutagenesis (19 aa, no Cys)"
254 (ix) FEATURE:
255 (A) NAME/KEY: misc_feature
256 (B) LOCATION:57..59
257 (D) OTHER INFORMATION:/product= "random codon by
258 trinucleotide mutagenesis (19 aa, no Cys)"
261 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:
263 TGGAAAGCTGA AGACGTGGGC GTGTATTATT GCCAGCAGBV TNNKNNKNNK NNKCCGNNKT
265 TTGGCCAGGG TACGAAAGTT
267 (2) INFORMATION FOR SEQ ID NO: 10:
269 (i) SEQUENCE CHARACTERISTICS:
270 (A) LENGTH: 18 base pairs
271 (B) TYPE: nucleic acid
272 (C) STRANDEDNESS: single
273 (D) TOPOLOGY: linear
275 (ii) MOLECULE TYPE: other nucleic acid
276 (A) DESCRIPTION: /desc = "synthetic oligonucleotide"
281 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:
283 AACTTCGTA CCCTGGCC
285 (2) INFORMATION FOR SEQ ID NO: 11:
287 (i) SEQUENCE CHARACTERISTICS:
288 (A) LENGTH: 108 base pairs
289 (B) TYPE: nucleic acid
290 (C) STRANDEDNESS: single
291 (D) TOPOLOGY: linear
293 (ii) MOLECULE TYPE: other nucleic acid
294 (A) DESCRIPTION: /desc = "synthetic oligonucleotide"

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/490,064

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Input Set : N:\Crf3\RULE60\09490064.raw.txt
 Output Set: N:\CRF4\03172005\I490064.raw

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W--> 295           library"
298   (ix) FEATURE:
299     (A) NAME/KEY: misc_feature
300     (B) LOCATION:21..23
301     (D) OTHER INFORMATION:/product= "random codon by
302 trinucleotide mutagenesis (19aa, no Cys)"
304   (ix) FEATURE:
305     (A) NAME/KEY: misc_feature
306     (B) LOCATION:27..35
307     (D) OTHER INFORMATION:/product= "random codons by
308 trinucleotide mutagenesis (19 aa, no Cys)"
310   (ix) FEATURE:
311     (A) NAME/KEY: misc_feature
312     (B) LOCATION:36..41
313     (D) OTHER INFORMATION:/product= "random codons by mixed
314 monomers (A/G A/C/G T)"
316   (ix) FEATURE:
317     (A) NAME/KEY: misc_feature
318     (B) LOCATION:42..44
319     (D) OTHER INFORMATION:/product= "random codon by
320 trinucleotide mutagenesis (19aa, no Cys)"
322   (ix) FEATURE:
323     (A) NAME/KEY: misc_feature
324     (B) LOCATION:48..50
325     (D) OTHER INFORMATION:/product= "random codon by
326 trinucleotide mutagenesis (19aa, no Cys)"
329   (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:
331 AGGGTCTCGA GTGGGTGAGC NNKATTNNKN NKNNKRVTRV TNNKACCCNNK TATGCGGATA      60
333 GCGTGAAAGG CCGTTTACCC ATTTCACGTG ATAATTCGAA AAACACCA      108
335 (2) INFORMATION FOR SEQ ID NO: 12:
337   (i) SEQUENCE CHARACTERISTICS:
338     (A) LENGTH: 105 base pairs
339     (B) TYPE: nucleic acid
340     (C) STRANDEDNESS: single
341     (D) TOPOLOGY: linear
343   (ii) MOLECULE TYPE: other nucleic acid
344     (A) DESCRIPTION: /desc = "synthetic oligonucleotide
W--> 345           library"
348   (ix) FEATURE:
349     (A) NAME/KEY: misc_feature
350     (B) LOCATION:21..23
351     (D) OTHER INFORMATION:/product= "random codon by
352 trinucleotide mutagenesis (19aa, no Cys)"
354   (ix) FEATURE:
355     (A) NAME/KEY: misc_feature
356     (B) LOCATION:27..32
357     (D) OTHER INFORMATION:/product= "random codons by
358 trinucleotide mutagenesis (19aa, no Cys)"
360   (ix) FEATURE:

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VERIFICATION SUMMARY
PATENT APPLICATION: US/09/490,064

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Input Set : N:\Crf3\RULE60\09490064.raw.txt
Output Set: N:\CRF4\03172005\I490064.raw

L:32 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:33 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:38 M:238 W: Alpha Fields not Ordered, Reordered [(A) APPLICATION NUMBER:] of (1) (vii)
L:1569 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:44
L:1573 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:44
L:1577 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:44
L:1581 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:44
L:1585 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:44
L:1589 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:44
L:1593 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:44
L:1656 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:46
L:1660 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:46
L:1664 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:46
L:1668 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:46
L:1672 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:46
L:1676 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:46
L:1680 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:46
L:1736 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:48
L:1740 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:48
L:1744 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:48
L:1748 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:48
L:1752 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:48
L:1756 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:48
L:1760 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:48
L:1764 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:48
L:1823 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:50
L:1827 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:50
L:1831 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:50
L:1835 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:50
L:1839 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:50
L:1843 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:50
L:1847 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:50
L:1903 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:52
L:1907 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:52
L:1911 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:52
L:1915 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:52
L:1919 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:52
L:1923 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:52
L:1927 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:52
L:1983 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:54
L:1987 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:54
L:1991 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:54
L:1995 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:54
L:1999 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:54
L:2003 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:54
L:2007 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:54
L:2063 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:56
L:2067 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:56

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Input Set : N:\Crf3\RULE60\09490064.raw.txt
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L:2071 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:56
L:2075 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:56
L:2079 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:56
L:2083 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:56
L:2087 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:56
L:2091 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:56